Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
Implementation of Section 309(j) of the Communications Act Competitive Bidding	)	PP Docket No. 93-253

COMMENTS OF HUGHES TRANSPORTATION MANAGEMENT SYSTEMS

Hughes Transportation Management Systems ("Hughes"), a subsidiary of Hughes Aircraft Corporation, hereby submits comments in the above-captioned proceeding, in accordance with the Commission's Notice of Proposed Rulemaking, FCC 93-455, PP Docket No. 93-253 (October 12, 1993) (the "Auction NPRM"). Hughes is the developer and manufacturer of an Automatic Vehicle Monitoring ("AVM") system called Vehicle to Roadside Communications ("VRC"), and comments here in opposition to use of competitive bidding in licensing VRC and similar AVM technologies. See Auction NPRM at ¶ 145 (requesting comments on applicability of competitive bidding to, among others, AVM services).

As noted in the Auction NPRM, AVM services are the subject of a separate rulemaking pending before the Commission. Auction NPRM at n. 153. See also Automatic Vehicle Monitoring Systems, 8 FCC Rcd. 2502 (April 9, 1993) ("AVM NPRM"). The Commission has tentatively decided to delay action on the question of competitive bidding for AVM, in view of the AVM rulemaking, and because the principal use of frequencies

proposed for AVM may not be compensated services to subscribers. Auction NPRM at n. 153. See also Id. at ¶¶ 30-33 (discussing "principal use" requirement). Hughes supports the Commission's tentative conclusion that AVM services do not meet criteria for application of competitive bidding procedures.

I. BACKGROUND

AVM services are divided into two general categories: (1) those used to perform vehicle location through so-called pulse-ranging multilateration techniques, involving communications between vehicles and fixed stations that cover relatively large areas and long ranges ("wide-area" systems); and (2) those in which transmissions between vehicles and fixed stations occur only when the vehicles are very close to such stations, generally at ranges of no more than 100 meters ("local-area" systems). See AVM NPRM at 2504 (describing types of AVM systems).[1/] A competitive bidding approach is not suited to local-area AVM systems, of which Hughes' VRC system is an example.

The basic VRC system employs a fixed base station, or "reader," and transponders, or "tags," mounted on vehicles or other objects to be monitored. The reader includes a transmitter, receiver and antenna installed at the side of the highway segment to be monitored. Each tag contains a low power transponder that receives interrogation or

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1. In its proposed rules for AVM, the Commission designates the two types of AVM systems as "wide-band" and "narrow-band," respectively. AVM NPRM at 2504. The Commission proposes to allocate the 904-912 and 918-926 MHz bands for wide-band multilateration use, and 902-904, 912-918 and 926-928 MHz for narrow-band use. Id. at 2505-07. As Hughes and several other commenters have pointed out in comments in the AVM proceeding, the Commission's designations of the two categories of AVM service could place some multilateration services and localized services in the same band, resulting in probable harmful interference. Accordingly, these commenters have proposed avoiding interference by use of the wide- and local-area designations, with multilateration AVM systems (wide-area) and localized AVM systems (local-area) allocated separate channels.

information signals transmitted by the reader, and responds by emitting an identification signal and other stored information, as appropriate, that is picked up by the reader.

Readers operate over a relatively small area, such as in the vicinity of a toll plaza or truck weigh station, and corresponding tags transmit only within that area, upon interrogation by a reader. Multiple VRC readers can be connected to networks for data processing and monitoring at central control points, and tags can be connected to in-vehicle information display equipment.

Through effective data links between moving vehicles and the surrounding infrastructure, local-area AVM systems, such as Hughes' VRC, are increasingly used to provide automated toll collection, vehicle location and tracking, traffic monitoring and rerouting, emergency and services availability message dissemination, and a variety of other services.

II. DISCUSSION

Local-area AVM services, as contemplated by the AVM NPRM, should not be licensed subject to competitive bidding procedures because: (1) applications for such services cannot be mutually exclusive, and (2) the principal use of such services does not involve "the transmission or reception of communications signals to subscribers for compensation." Auction NPRM at ¶¶ 22-3, 30.

A. MUTUAL EXCLUSIVITY

The Commission has proposed that, in accordance with the legislation authorizing competitive bidding procedures, such procedures are permitted "only . . . if mutual exclusivity exists among applications that have been accepted for filing." Id. at ¶ 22

(citing the Omnibus Reconciliation Act of 1993 at § 309(j) ("Budget Act")). As further noted in the Auction NPRM, in the case of certain channels used for private radio services, "mutual exclusivity cannot exist because the channels are shared by numerous licensees." Id. at n. 3. Therefore, licensing such services by auction is not authorized under the competitive bidding provisions of the Budget Act.

The Commission proposes that local-area AVM systems "be licensed on a nonexclusive basis, with coordination performed by licensees to avoid interference." AVM NPRM at 2507 (emphasis added). Hughes supports this proposed means of avoiding harmful interference between AVM systems, especially in view of the fact that local-area systems, which are designed to operate over relatively short ranges, are unlikely to be the subject of competing applications for collocated, and co-channel, facilities.[2/]

Nonexclusive licensing of local-area AVM facilities, along with informal coordination methods, will allow applicants greater flexibility in meeting demands for particular services, and will reduce administrative burdens for both licensees and the Commission. In view of the proposed sharing of frequencies, competitive bidding procedures would not be applicable to local-area AVM services.

B. PRINCIPAL USE

In order to qualify for competitive bidding under the procedures proposed by the Commission, "the principal use of [the spectrum in question] must involve, or be reasonably likely to involve, the transmission or reception of communications signals to

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2. In its comments in the AVM rulemaking proceeding, Hughes has recommended antenna height and power limitations that would further reduce the likelihood of mutual interference between local-area AVM systems.

subscribers for compensation." Auction NPRM at ¶ 30. The Commission goes on to propose "that at least a majority of the use of a Commission regulated service or class of service must for" subscriber-compensated service in order to qualify for competitive bidding. Id. at ¶ 32.

The Commission correctly notes that, "because AVM frequencies are shared with the government, which is primary in this band, the principal use of these frequencies might not be for the provision of service to subscribers for compensation." Id. at n. 153. Government use of the 902-928 MHz band, proposed for AVM use, is for radiolocation services. See 47 C.F.R. § 2.106.

Even if government radiolocation does not constitute the principal use of the AVM band, most local-area AVM services, proposed for allocation in the 902-904, 912-918 and 926-928 MHz portions of the band, do not involve "provision of service to subscribers for compensation" required by the Budget Act.

Many existing and planned local-area AVM services support traffic and commercial vehicle management initiatives undertaken on behalf of government entities. See AVM NPRM at 2502 (AVM systems "important components of future Intelligent Vehicle Highway System"). For example, Hughes is currently under contract to install a network of VRC facilities along Interstate Highway 75 on behalf of several state governments. This system, called Advantage I75, will assist state authorities in monitoring weights of commercial trucks and in reducing congestion in the vicinity of I75 truck weigh stations. State transportation authorities will be the licensees for the facilities. Advantage I75 is one

example of a number of similar AVM initiatives underway across the United States. These systems clearly do not involve provision of communications services to paying subscribers.[3/]

Additionally, although a number of commercial AVM services do exist, most of those do not involve transmission of communications signals to or from paying subscribers. For example, local-area AVM services can be used in private industry to monitor movement of cargo or commercial traffic. See AVM NPRM at 2502. Such uses are properly characterized as "private services" under the Commission's proposed competitive bidding rules, since they are used solely for internal management by commercial licensees, and are not paid for by subscribers to a particular telecommunications service. See Auction NPRM at ¶ 25. Even where local-area AVM facilities assist in assessing fees for particular services, such as in monitoring commercial parking facility use, the fees involved are not paid as compensation for the transmitted signals. Rather, the AVM spectrum is used in such cases merely to facilitate fee collection for a separate service. Accordingly, such AVM services are not authorized under the Budget Act for licensing through competitive bidding.

Unfortunately, AVM is a relatively new area of telecommunications service, and insufficient historical data are available to determine conclusively that the principal use of AVM does not involve transmission of signals to or from subscribers in return for compensation. See Id. at ¶ 32 (Commission's experience in regulating services used to determine principal use for this purpose). However, while some directly-compensated local-

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3. Further, such services would be exempt from competitive bidding under the Commission's proposed rules, because they are "services used by public safety entities." Auction NPRM at ¶ 2.

area AVM services may arise, it is evident that the majority of such services are not provided to "paying subscribers" as defined in the Auction NPRM. Id. at ¶ 23.[4/]

III. CONCLUSION

Because local-area AVM technologies will not be subject to exclusive frequency use, and because the majority of such technologies will not be used to provide telecommunications services to paying subscribers, Hughes respectfully requests that the Commission exclude such services from consideration for competitive bidding.

Respectfully submitted,

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4. While, as discussed in these comments, local-area AVM services do not satisfy statutory requirements for competitive bidding, such services comprise only a portion of the Intelligent Vehicle-Highway Systems ("IVHS") programs managed by the Department of Transportation. These programs have been directed by Congress in the Intelligent Vehicle-Highway Systems Act of 1991, Pub. L. No. 102-240, 105 Stat. 2189 (codified in 23 U.S.C.S. § 307 note), and in the Intermodal Surface Transportation Efficiency Act, Pub. L. No. 102-240, 105 Stat. 1914 (codified in 49 U.S.C.S. § 101 note). A number of IVHS initiatives will involve use of the radio frequency spectrum. The Commission should carefully consider the impact of adopting competitive bidding procedures on IVHS system deployment, in view of congressional mandates regarding such systems.